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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,912	06/25/2002	Toshiharu Kawasaki	0152-0593 P	2776

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EXAMINER

SANDERS, KRIELLION ANTIONETTE

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/088,912

Applicant(s)

KAWASAKI ET AL.

Examiner

Kriellion A. Sanders

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-15 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the claimed compositions wherein the arylbenzofuranone possess a carbocyclic aromatic group as R_1 , it does not reasonably provide enablement for the claimed compositions wherein the arylbenzofuranone possesses a heterocyclic aromatic group as R_1 . The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to practice the invention commensurate in scope with the claims. This is because heterocyclic moieties may possess a broad range of functional characteristics, which may substantially alter the overall performance of the arylbenzofuranone. Applicant has provided no real description of those arylbenzofuranones that possess a heterocyclic aromatic group as R_1 .

3. Applicant's arguments filed 6/16/2004 have been fully considered but they are not persuasive.

- a. At page seven of the remarks, applicant recites the Federal Circuit and states That "if the examination at the initial stage does not produce a prima facie case of unpatentability, then without more the applicant is entitled to grant of the patent." This argument is not found to be persuasive relevant to the rejection under 35 USC 112 first paragraph. The rejection in itself clearly provides more than a prima facie case of obviousness. Applicant is reminded that a rejection under 35 USC 102 was also rendered in this application.

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At page 8 of his remarks, applicant alleges that the examiner has not provided sufficient reasons for doubting that there is sufficient enablement for compounds when R1 represents a substituted or unsubstituted heterocyclic aromatic moiety. This argument is not found to be persuasive because as stated above, heterocyclic moieties may possess a broad range of functional characteristics, which may substantially alter the overall performance of the arylbenzofuranone.

At page 9 of his remarks, applicant avers that there is sufficient guidance (in the specification) for the skilled artisan to make and/or use the present invention. Applicant states that the skilled artisan would not find it an undue burden to use a heterocyclic aromatic group in place of the xylene starting materials as the source for the substitution at the 3-position of the benzofuranones. In specific applicant avers that find it would not be an undue burden for the skilled artisan to use a heterocyclic aromatic group in place of the xylene starting materials as the source for the substitution at the 3-position of the benzofuranones to modify the benzofuranones of Hinsken et al, US Patent No. 4,338,224. Applicant is advised that Hinsken has been relied upon as anticipating or rendering the instant claims obvious. This statement by applicant serves to support the motivational criteria that the components of Hinsken et al are if at least not essentially the same as applicant's, obvious variants thereover. Since applicant has admitted to this on the record further comments will be addressed to the prior art rejection over Hinsken.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2, 4 and 6-9 and 15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hinsken et al, US Patent No. 4,338,244.
2. Hinsken et al discloses compositions that comprise an arylbenzofuranone that correspond to those of applicant's claims and a polymer which may comprise an aromatic monovinyl monomer. In specific Hinsken discloses arylbenzofuranone according to formula Ia wherein Ra may be hydrogen or a substituent of formula (aa/1). This substituent is considered to be a heterocyclic aromatic group. In formula Ia, substituent R1a may be hydrogen or phenyl.
3. If in formula Ia, Ra is hydrogen and substituent is phenyl the patented compounds are identical to applicant's claimed compounds.
4. If in formula Ia, Ra is a substituent of formula (aa/1) and substituent R1a is hydrogen The claimed compounds are stereoisomers of applicant's compounds since the substituent of formula (aa/1) is again considered to be a heterocyclic aromatic group. Hinsken discloses that the arylbenzofuranone may be incorporated into the polymers before, during or after the polymerization in an amount of from 0.1 to 5 % by weight of the polymer and are formulated into non-foamed films, which essentially are sheets. See Example D at col. 21 and claim 20. No patentable difference is readily ascertained between the present and patented inventions.
5. Applicant's arguments filed June 16, 2004 have been fully considered but they are not persuasive. Applicant's arguments are directed to the fact that Hinsken et al is silent to the ratio

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of residual aromatic monovinyl monomer. This argument is not persuasive because the failure of Hinsken et al to recite the quantity of a by-product does not indicate that there is such a by-product. It is probable that since Hinsken utilizes identical components as applicant and fails to recite a quantity of bi-product, that such a bi-product or residue is not present. Applicant's comparative data at Example 1, 12, and comparative Example 1 are not persuasive because Hinsken utilizes a benzofuran-2-one. Applicant's comparative example does not use any type of deterioration inhibitor. Therefor, applicant's remarks and data are not persuasive to overcome the rejection. Applicant has not stated that the arylbenzofuranone or aromatic monovinyl monomer differ from those of applicant's claims. Therefor the claims are considered to be anticipated by the reference.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over as applied to claims 1, 2, 4 and 6-9 and 15 above, and further in view of the following statements.

Hinsken indicates that arylbenzofuranone according to formula Ia may be used to stabilize polymers comprising a monovinyl monomer, such as styrenic resins. In specific Hinsken discloses that the arylbenzofuranone may be incorporated into the polymers before, during or after the polymerization in an amount of from 0.1 to 5 % by weight of the polymer. Particulars of the polymerization process such as devolatilization and uniform mixing procedures are well

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known to the art-skilled. Therefor applicant's claims 3 and 5 are also obvious over the art.

Claims 7-13 are therefor obvious to the ordinary practitioner of this art. It would be obvious to cover a foamed Styrofoam container with the films of Hinsken et al. See col. 14, lines 23-65 and claim 20.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

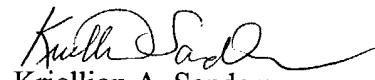
Applicant addressed his remarks to this rejection in conjunction nt with his remarks to the rejection under 35 USC 102 above. Therefor the rejection under 35 USC 103 is maintained for reasons set forth in the rejection under 35 USC 102 above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 6:30-7:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2351.



Kriellion A. Sanders
Primary Examiner
Art Unit 1714

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September 5, 2004